JB-304

Video Villa Door Entry System

User's Manual (V2.4)

Please read this manual carefully before the products are installed. Technical specifications and contents are subject to change accordingly without advanced notification.

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Part 1. Product introduction - - -

Part 1. Product introduction

1.1 Use purpose

The system is applied to single family houses, offices, shops, warehouses, and other access control purpose.

1.2 System configuration

Configuration	Options	Remarks
Door station	Model No.5 (V) Model No.6 (VI) Model No.9 (IX) Model No.15	①Only Model No.5 door panel is plastic. The others are all die-casting aluminum. ②There are options of the bracket (surface mount) and installation box (flush mount) for Model No.6 and No.15 door panels. ③Card reader is available on Model No.5 and No.15. ④Model No.9 door station is with a pinhole camera. ⑤Name tag is available on Model No.9 and No.15. ⑥Door stations don't require any direct power supply.
Indoor phone	Model: V-16 Model: V-17 Model: V-18 Model: V-21 Model: V-22 Model: V-23 Model: V-25 Model: V-26 Model: N60 Model: F-9 (2nd indoor phone)	①4" CRT b/w screen is available on Model V-21. ②4" TFT color screen is available on Model V-18, V-21, and V-26. ③7" TFT color screen is available on Model V-16, V-17, V-22, V-23, V-25, and N60. ④Model F-9 is for the economic purpose of having extra indoor phones. ⑤Every video indoor phone requires the 18VDC power.
Power supply	Adapter (18VDC, 1A) Transformer (18VDC, 2.2A)	①Both are free voltage input AC100V~240V. ②One transformer can support up to 4 video indoor phones while one adapter can support only one video indoor phone.

⚠ We may provide more options for the devices without advanced notification.

1.2.1 Door stations

Model No.5 (V)
121X202X46(mm)

Model No.6 (VI)
94X138X38(mm)

Model No.9 (IX)
54.5X140.5X40(mm)

Model No.15 surface mount
79X148X45(mm)

Model No.15 surface mount, card reader. 79X148X45(mm)

Model No.15 flush mount
93X168X52(mm)

Model No.15 flush mount, card reader. 93X168X52(mm)

1.2.2 Indoor phones

Model F-9
100X135X23(mm)

Model V-21
192X214X47(mm)

Model V-22
266X175X25(mm)

Model V-23
266X175X25(mm)

Model V-18
170X114X22(mm)

Model V-26
180X115X21(mm)

Model V-25
225X157X26(mm)

Model N60
239X139X20(mm)

Model V-16
266X184X23(mm)

Model V-17
266X184X23(mm)

1.2.3 Power supply

Adapter

Transformer
(DIN Rail)

1.3 Features and functions

> Call, answer, and release doors.
> DIY system with 4 wires; PLUG & PLAY connection.
> Various flexible connection diagrams are optional.
> Max. capacity: Up to 4 door stations and 4 indoor phones.
> Intercom and calling transfer between indoor phones.
> Various melody ring tones are optional.
> Two options to release doors, by SIGNAL or by POWER (except Model No.9).
> Surface and flush mount are optional (Model No.6 and No.15).
> Rainproof and anti-vandal (Model No.6, No.9 and No.15).
> Night viewing; illuminated call button.
> Pin-hole door camera is optional (Model No.9).
> Audio baby monitor.
> Card reader is optional (Model No.5 and 15).
> Touch button indoor phone is optional (Model N60).

Part 2. Technical parameters & structure

2.1 Technical parameters

2.1.1 Door station

Camera:	1/3" SONY CCD (color) or CMOS (B/W)
Viewing angle:	92°
Lens:	F=3.6
Resolution:	420TV Line
Min. illumination:	0.01 LUX
Video output:	1Vp-p/75Ω
Audio SNR:	≥25dB
Audio distortion:	≤7%
Standby current:	≤60mA
Working current:	≤230mA
Working voltage:	DC18V±10%
Environment temperature:	-40℃～+70℃

2.1.2 Indoor phone

Display:	4"CRT, 4"TFT, 7"TFT
Resolution:	420TV Line
Video output:	1Vp-p/75Ω
Audio SNR:	≥25dB
Audio distortion:	≤7%
Standby current:	≤60mA
Working current:	≤500mA
Working voltage:	DC18V±10%
Environment temperature:	-10℃～+55℃

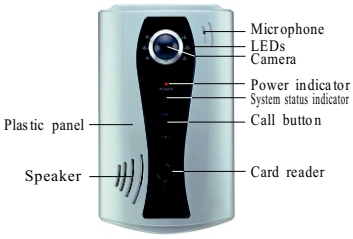
2.1.3 Power supply

	Adapter	Transformer
Voltage input:	AC100V~240V	AC100V~240V
Voltage output:	DC18V	DC18V
Current output:	1A	2.2A
Power plug style:	Optional	/

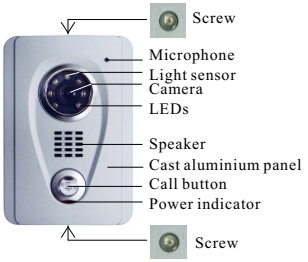
2.2 Structure

2.2.1 Door stations

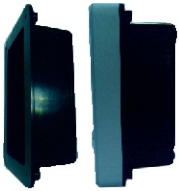
A) Model No.5:



B) Model No.6:

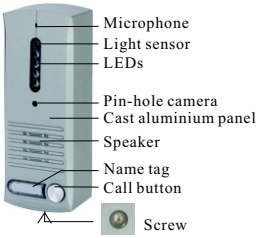


Surface mount bracket



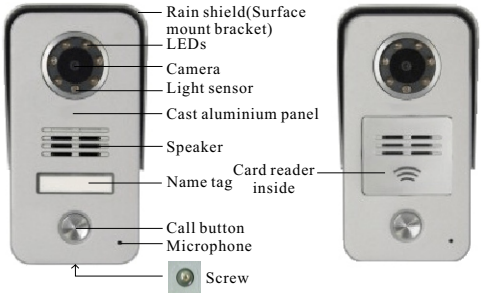
Flush mount box

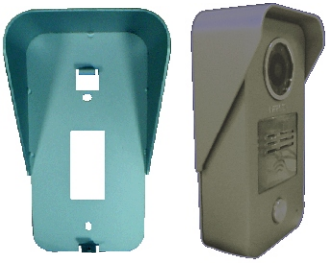
C) Model No.9:



Bracket

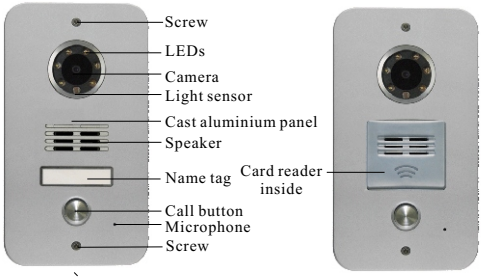
D) Model No.15 (Surface mount):





Surface mount bracket

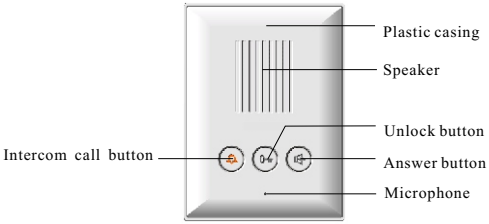
E) Model No.15 (Flush mount):



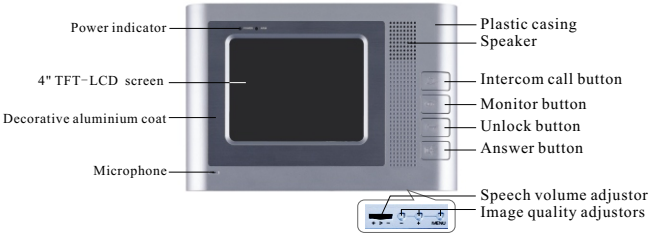
Flush mount box

2.2.2 Indoor phones

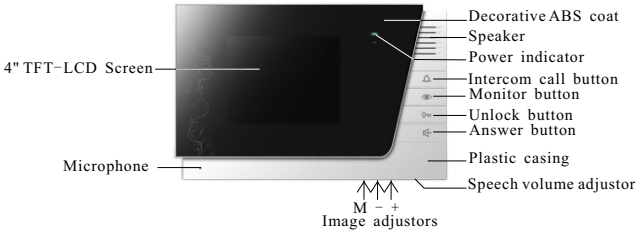
A) Model F-9



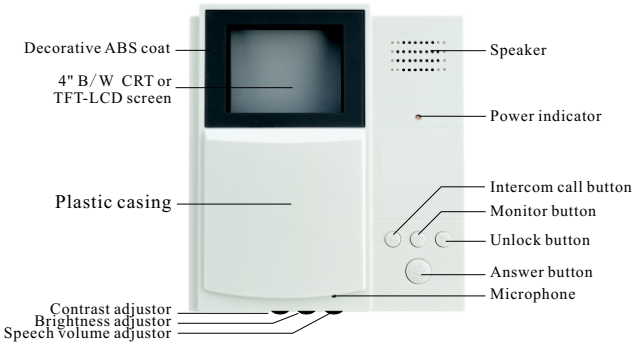
B) Model V-18



C) Model V-26



D) Model V-21



E) Model V-16

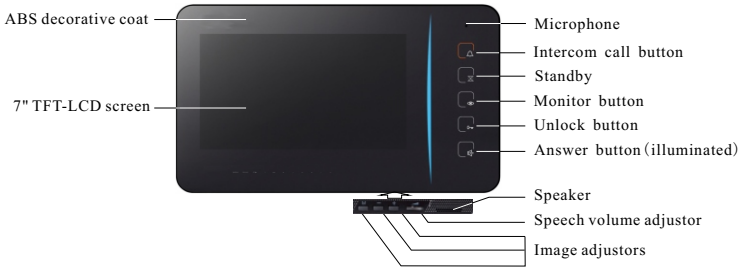
F) Model V-17

G) Model V-22

H) Model V-23

I) Model V-25

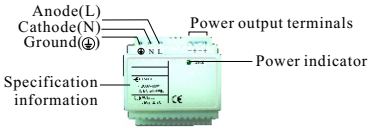
J) Model N60



2.2.3 Power supply

A) Adaptor

B) Transformer

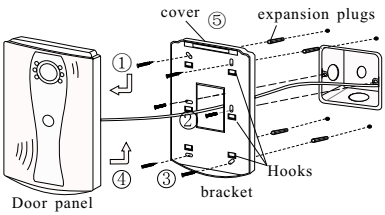


Part 3. Installation and connection

3.1 Installation
3.1.1 Door stations

Model No. 5 (V)

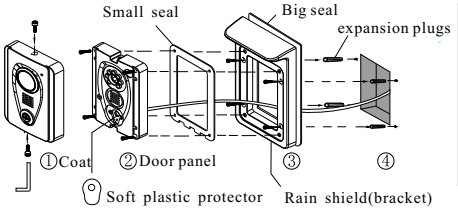
a. Push down the door panel and take it off from the bracket(①).
b. Fix the bracket with screws on the box(②) or on the wall (③).
c. Put the door panel on the bracket after connect the cable, and then push it up in order to lock it in the hooks(④).
d. Take off the cover and fix the door panel in the bracket with two screws. And then put the cover back on the original position(⑤).



Model No. 6 (VI)

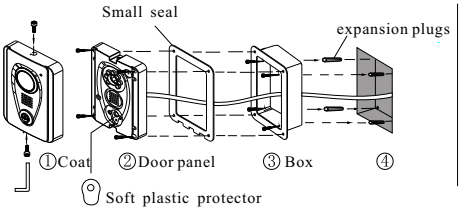
A) Surface mount

a. Take off the coat from the door panel with the enclosed driver (①).
b. Install the expansion plugs in the wall beside the cable(④).
c. Put the big seal behind the bracket and fix both on the wall with the screws(③).
d. Put the small seal behind the door panel and then fix both on bracket after connect the cable(②).
e. Cover the door panel with the coat and fix them with the screws and driver(①).



B) Flush mount

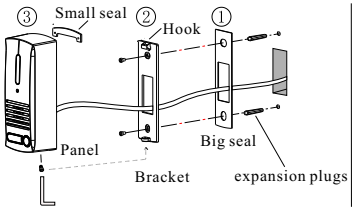
a. Produce a groove (115x70x41mm) on a proper position in the wall(④).
b. Put the box in the groove and fix it in the wall with screws and cement(③).
c. Take off the coat from the door panel with the enclosed driver(①).
d. Put the small seal behind the door panel and fix them on the box with screws after connect the cable(②).
e. Cover the panel with the coat and fix it(①).



⚠ *Please mind the soft plastic protector is put on the call switch. It is easy to drop.*

Model No.9 (IX)

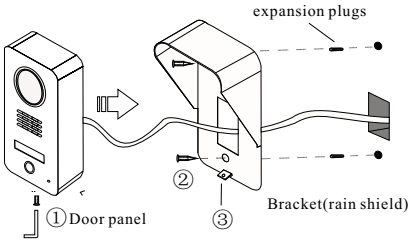
a. Release the panel from the bracket with the enclosed screw driver(②③).
b. Choose a proper position and fix the big seal and bracket on the wall with 2 screws (①②).
c. Put the panel on the bracket after connect the cable(③).
d. Fix the panel from the bottom with the enclosed driver and screw(②③).

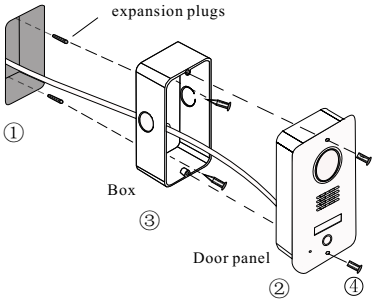


Model No.15

A) Surface mount

a. Take off the door panel from the bracket with the enclosed screw driver(①).
b. Fix the bracket on the wall with two screws and expansion plugs(②).
c. Put the door panel on the bracket and fix it after connect the cable(③).





B) Flush mount

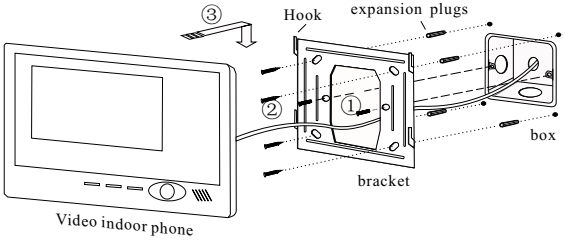
a. Produce a groove (75x150x50mm) on a proper position of the wall(①).
b. Take off the door panel from the box with the enclosed screw driver(②③).
c. Fix the box in the groove with screws and expansion plugs(①).
d. Fix the door panel in the box with the screws(④).

⚠ *①Make sure if the door station is waterproof and choose a proper position.*
②Mind the actual camera viewing angle and put the door station on a proper position. [the manufacturer suggests 1.4~1.8m of height.]
③Do not put the devices at the places where there are high voltage, high temperature, strong magnet, corrosive, humidification, ets.
④Do not drag the cable.
⑤Keep the devices clean.

3.1.2 Indoor phones

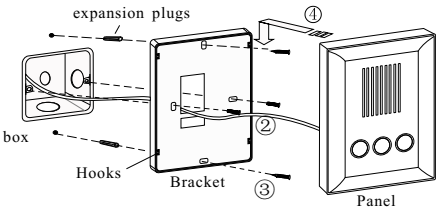
A) Video indoor phones

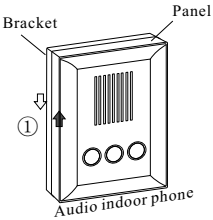
a. Fix the bracket on the box or on the wall with the screws(① or ②).
b. Move the indoor phone and put it on the bracket after connect the cable(③).



B) Audio indoor phones

a. Take off the bracket by pushing the bracket and panel in contrary direction(①).
b. Fix the bracket on the box or on the wall with screws(② or ③).
c. Put the panel on the bracket and push it down until the panel is locked by the hooks(④).

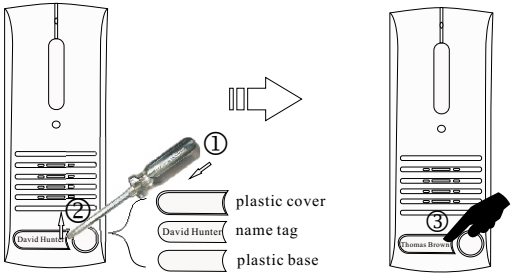




⚠ *Audio and video indoor phones may have different sizes of bracket. Please install accordingly.*

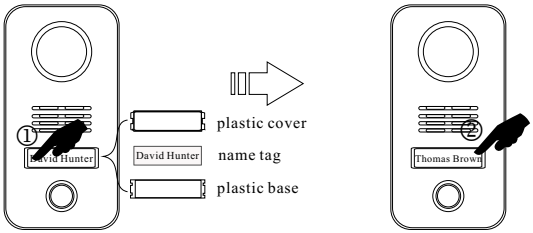
3.1.3 Name tag

A) Model No.9



a. Use a proper driver and insert it into the gap of the name tag and then turn it up(① ②).
b. Change the name tag.
c. Insert the set of name tag into the groove(③).

B) Model No.15



a. Press the name tag at a side and then take it off(①).
b. Change the name tag.
c. Insert the set of name tag into the groove and then press it to be locked(②).

3.2 Connection

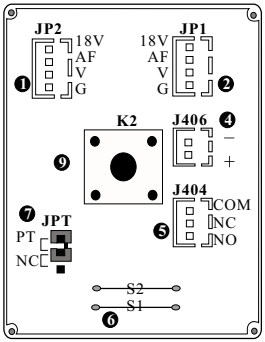
3.2.1 Wires and distance

Wires	Best distance	Remarks
RVV4x0.5mm² (U.S.:AWG20)	≤100m	Between the last door station and the last indoor phone
RVV2x1.0 mm² (U.S.: AWG18)	≤100m	For DIN rail power supply (transformer)

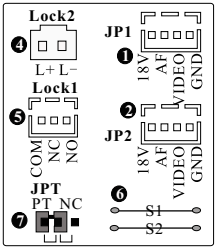
3.2.2 Terminals

❶❷ Terminals to door station or/and indoor phone. Both have no difference.
❸ Terminal to power supply
❹ Terminal for electronic POWER lock
❺ Terminal for electronic SIGNAL lock
❻ Door station address code wires
❼ Electronic lock selector(jumper)
❽ Audio jumper
❾ Card register button

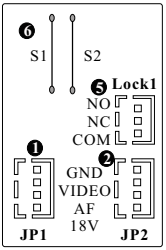
A) Door stations



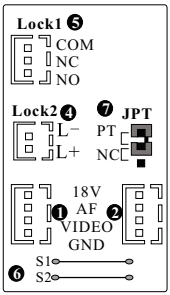
Model No.5(V)



Model No.6(VI)

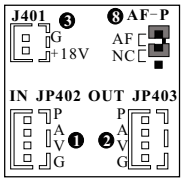


Model No.9(IX)

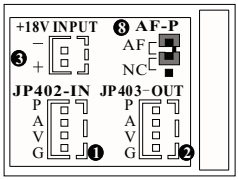


Model No.15

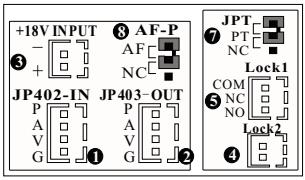
B) Indoor phones



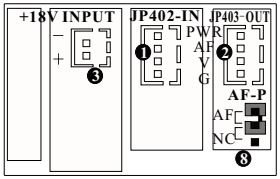
Model F-7



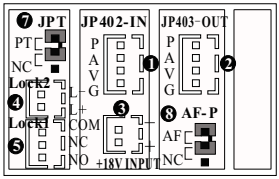
Model V-16



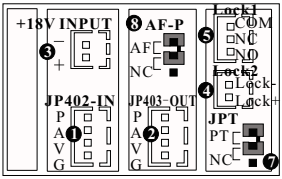
Model V-17



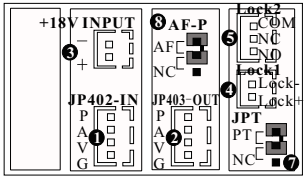
Model V-18



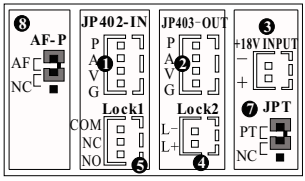
Model V21



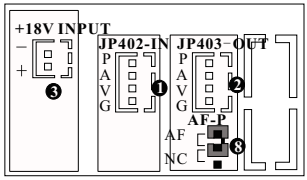
Model V-22



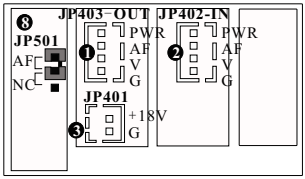
Model V-23



Model V-25



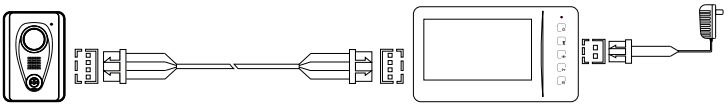
Model V-26



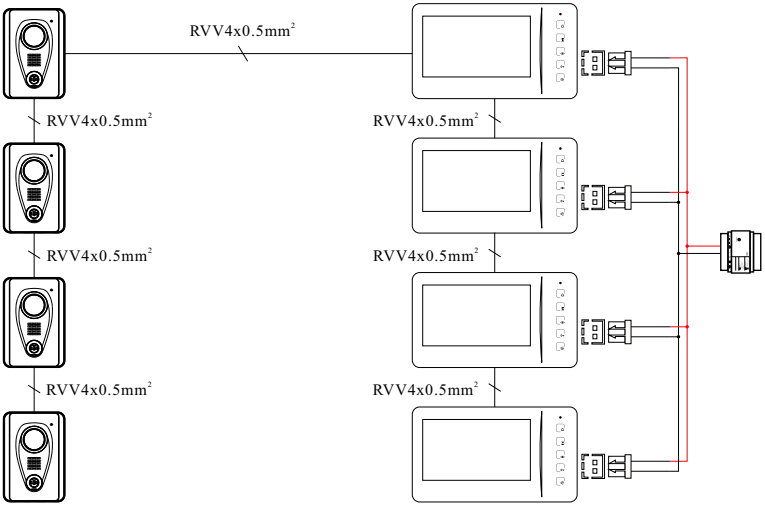
Model N60

3.2.3 Component diagram

A. Basic connection

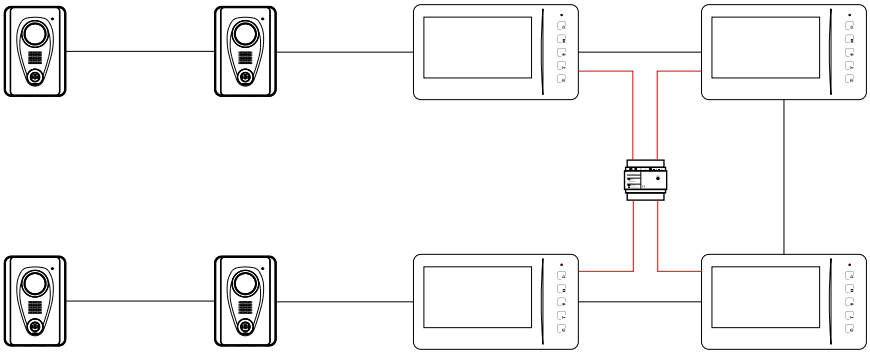


B. Best connection for up to 4 door stations and 4 indoor phones

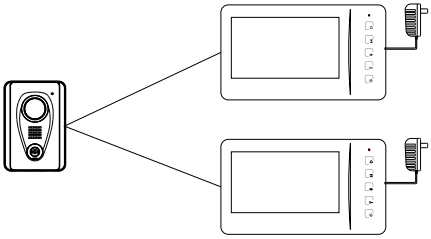


C. Other workable connection

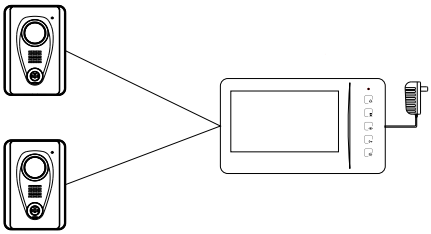
C1. Example 1:



C2. Example 2:



C3. Example 3:



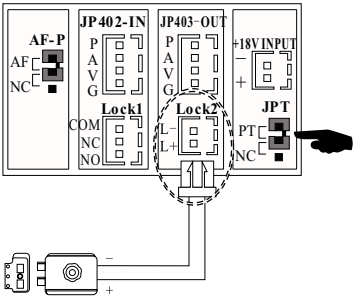
①The basic components are 1 door station, 1 indoor phone, and 1 power supply. The max. capacity the manufacturer suggests is 4 door stations and 4 indoor phones. More components may cause malfunctions.
②An adapter can support only one video indoor phone while a transformer can support up to 4 door stations and 4 indoor phones.
③All door stations do not require power supply.
④Audio indoor phones do not require independent power supply. They can share the same power supply with video indoor phone.
⑤For easy connection the diagrams of C1, C2, and C3 can be applicable accordingly to projects.
⑥Video resistors may be helpful in case there is any problem with image display especially while 2 or more video indoor phones are used. Please go to 4.2 for the resistors' usage.
⑦When there are 2 or more door stations, the address wires have to be cut so that every door stations have their exclusive address codes. If there are, please go to 4.3 for door station address.
⑧In case more indoor phones or door stations are required in diagram A,C1,C2,and C3, please connect them from the terminal wires and try. If the image quality is not good enough and the image adjustors cannot help, please read 4.2 and try accordingly.

3.2.4 Electronic locks

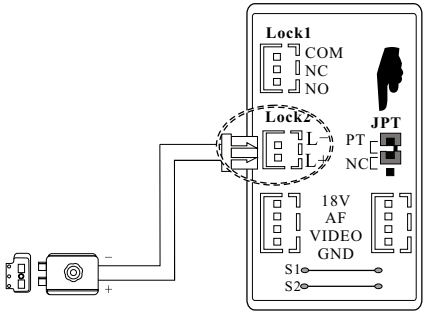
There are various electronic locks. People from different countries may have different practice of using electronic locks. Generally speaking there are two methods to release doors via door entry systems. One is SIGNAL. Another is POWER. This system supports both. Users may adopt any accordingly.

A) Diagrams for POWER electronic locks

A1. In door phone (example: Model V-25)

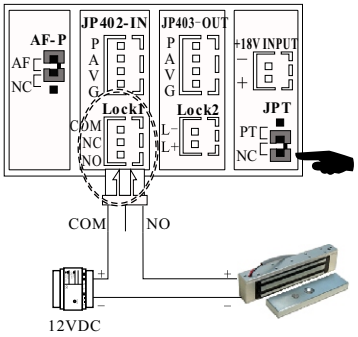


A2. Door station (example: Model No. 15)

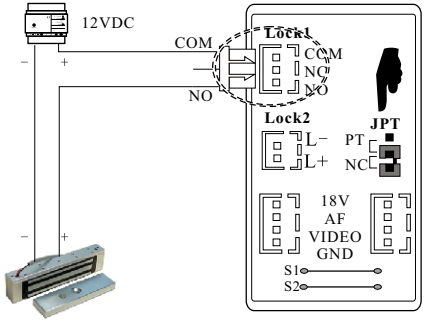


B) Diagrams for SIGNAL electronic locks

B1. Indoor phone (example: Model V-25)



B2. Door station (example: Model No. 15)

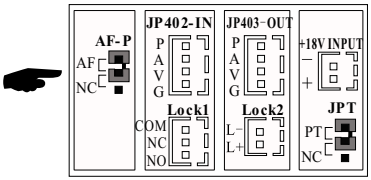


⚠ *①Please choose one of the abovementioned diagrams according to the electronic locks.*
②Instant output (Diagram A1 & A2): 12VDC, 500mA.
③Please put the jumper of JPT on PT position once you wire as diagram A1 or A2. But please put it on NC position once you wire as diagram B1 or B2.
④In diagram B1 and B2 COM terminal has to be connected. NC means close circuit. NO means open circuit. Please choose a right terminal according to the electronic locks.
⑤There are no terminals for electronic locks in the indoor phones of Model F-7, N60, V-16, V-18, V-26 and the door station Model No.9.
⑥The electronic locks can keep releasing in 0.5 second only in diagram A1 and A2, but in 5 seconds in diagram B1 and B2.
⑦It is available to release the electronic locks by directly pushing ⊶ button if the locks are connected to the indoor phones.
⑧SIGNAL locks and POWER locks can be connected to different door stations or indoor phones. There is no interfere.
⑨A SIGNAL lock and a POWER lock can be connected to the same door station or a same indoor phone, but the jumper of JPT has to be put on PT position, so that the instant strong power current will not destroy the devices.
⑩Please mind if the wires of electronic locks are nonpolarity.

Part 4. System programming

4.1 Audio jumper

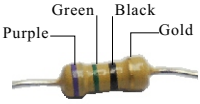
The audio jumper has to be put on AF position in the indoor phone if there is only one indoor phone. In case there are more indoor phones, only the last indoor phone is required to do that. Meanwhile the other indoor phones' jumpers have to be put on NC position. Please do the same if there are two or more routes such as the diagrams of C1 and C2 in 3.2.3.



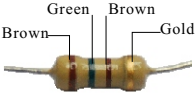
Video indoor phone(Model V-25)

4.2 Video resistor

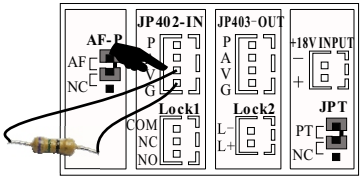
In case the image display is rolling or with any other abnormality problem and the image adjustors can not help, please try to use the enclosed video resistors to connect between GND (G) and Video (V) terminals in the last video indoor phone(s). Please take the following information as reference.



75Ω video resistor



150Ω video resistor



Video indoor phone(Model V-25)

Diagram (3.2.3)	Video resistor size and quantity required
A	75Ω video resistor: 1 piece
B	75Ω video resistor: 1 piece
C1	150Ω video resistor: 2 piece Connect each on the two indoor phones that are closest to the door stations.
C2	150Ω video resistor: 2 piece Connect each piece on the two indoor phones separately.
C3	75Ω video resistor: 1 piece

4.3 Door station address

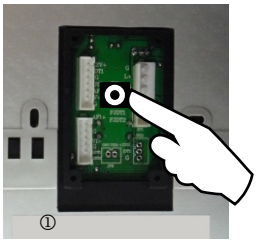
If there are two or more door stations, the door stations have to be addressed by cutting the code wires as the following table. The code wires are on the position ❻ as 3.2.2 A and marked as S1 and S2.

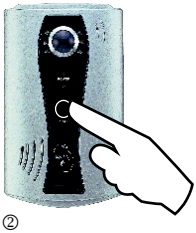
Door station address No.	Code wire: S1	Code wire: S2
0 (1st door station)	⊘	⊘
1 (2nd door station)	✂	⊘
2 (3rd door station)	⊘	✂
3 (4th door station)	✂	✂

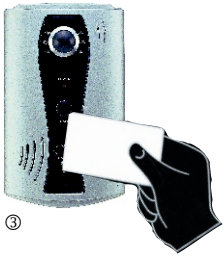
⚠ *Please be sure every door stations have exclusive address numbers if they work together.*

4.4 Register/Cancel cards (for Model No.5 &No.15 only)

4.4.1Model No.5


①


②


③

A. Register cards

a. Push the card register button in the back side of the door station (①). It will sound a beep.
b. Push the CALL button for 2 seconds. Release it after the door station sounds a double beep(②).
c. Put the cards proximate to the reader and register them one by one(③).
d. Push the card register button again to exit after registration(①).

B. Cancel cards

a. Push the card register button in the back side of the door station (①). It will sound a beep.
b. Push the CALL button for 4 seconds. Release it after the door station sounds a long beep(②).
c. Push the card register button again to exit(①).

4.4.2Model No.15

①

②

③

A. Register cards

a. Push the card register button in the back side of the door station with a tool(①). It will sound a beep.
b. Push the CALL button for 2 seconds. Release it after the door station sounds a double beep(②).
c. Put the cards proximate to the reader and register them one by one(③).
d. Push the card register button again to exit after registration(①).

B. Cancel cards

a. Push the card register button in the back side of the door station (①). It will sound a beep.
b. Push the CALL button for 4 seconds. Release it after the door station sounds a long beep(②).
c. Push the card register button again to exit(①).

Part 5. Operation

5.1 Operation on door stations

5.1.1 Call residents

Push the CALL button on the door station. The door will sound a feedback ring if the calling is successful. The calling can be ended immediately once the call button is pushed again. If there is no answer, the calling will end itself after 15 seconds.

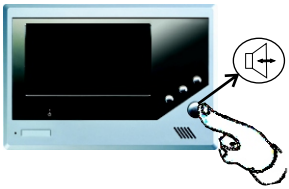
5.1.2 Release the door by cards

Put a registered card proximate to the reader. The door station will sound a beep.

5.2 Operation on indoor phones

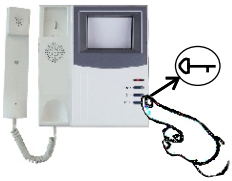
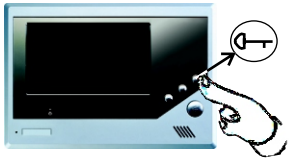
5.2.1 Answer

Pick up the handset or push button (handsfee) and speak.

or


5.2.2 Release door

Push button after pick up the hanset or push button (handsfree).


or


The door can be released by pushing button without calling, if the electronic lock is connected to the indoor phone.

5.2.3 Video surveillance

Push button and then the image in front of the camera will be displayed on the screen.

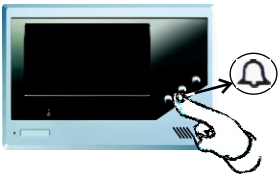
or

If there are two or more cameras, surveillance for different entrances is also available by a 2nd, 3rd, or 4th push. During surveillance it is available to speak with somebody outside by pushing button and release the door by pushing button.

5.2.4 Broadcast

Push button and then speak. The people nearby the other indoor phones (if any) can hear you.

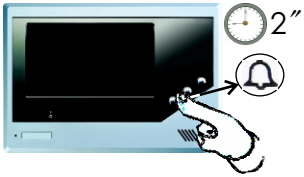
or



5.2.5 Call other indoor phones

Keep pushing button for 2 seconds. The other indoor phones will ring.

or



5.2.6 Call transfer

Push button to ring the other indoor phones while at intercom status. After somebody answers, the line will be transferred.

Functions of 5.2.4, 5.2.5 and 5.2.6 are available only if there are two or more indoor phones.

5.2.7 Adjust the image quality

Push button and pick up the handset or push button (handsfree) to keep displaying longer.

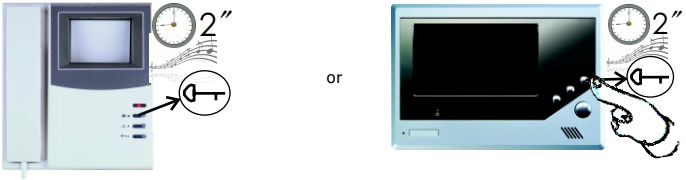
Move CONTRAST & BRIGHTNESS adjusters.

or

Push MENU button, the screen will show CONTRAST, BRIGHTNESS AND COLOR by turn, then push + and − buttons to adjust their scales.

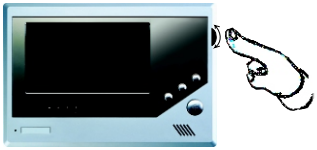
5.2.8 Change the ring tone

Keep pushing button for 2 seconds. The indoor phone will ring. Then continue to push the button again and again until the favorite ring sounds.



5.2.9 Adjust the ring & speech volume

Turn the wheel to decrease or increase the ring and speech volume.



All handsets are not available to adjust the ring and speech volume.

Part 6. Test

6.1 Test methods

After all components are installed and connected as the user's manual, please switch the power on and then try to operate all features on all door stations and indoor phones as Part 5.

6.2 Common malfunctions and obviation

Common malfunctions	Possible reasons	Obviation
No feedback ring after push the call button.Meanwhile the door station's LED indicator doesn't turn on.	Disconnection on the power supply or socket.	Replace the power supply or the socket.
	Disconnection on the (red or black) signal wires.	Check and connect the wires.
No image displayed. The others are all ok.	Disconnection on the (black) signal wire of the indoor phone.	Check and connect the wires.
Poor image quality	No video resistor connected on the indoor phone.	Check and connect the video resistor.
	Wrong matched video resistor connected.	Replace the wrong video resistor with a correct one.
Receive a call but cannot answer.	Audio jumper is not on the right position (usually AF).	Use the audio jumper on the right position accordingly.
Ghost image.	No video resistor connected on the indoor phone.	Check and connect the video resistor.
	Two or more door stations share a same address.	Cut the code wires to make exclusive address no. for every door station.